MotorGuide®

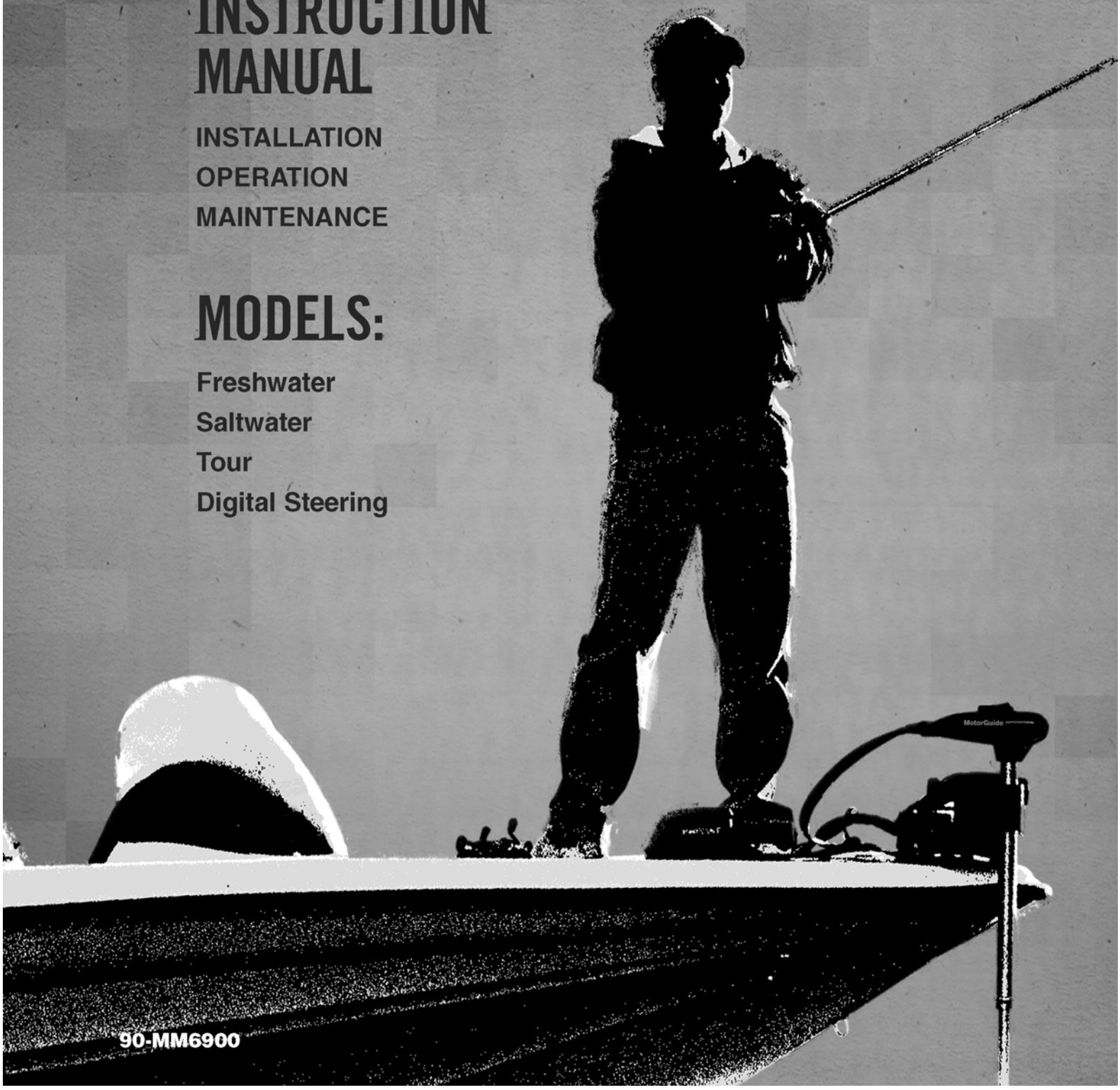
NEVER STOP.

OWNER'S INSTRUCTION MANUAL

INSTALLATION
OPERATION
MAINTENANCE

MODELS:

Freshwater
Saltwater
Tour
Digital Steering



90-MM6900

This MotorGuide Electric Motor, assembled of U.S.A. and foreign components by MotorGuide, 835 W. 41st St., Tulsa, OK, USA, complies with requirements of Directives 89/392/EEC and 89/336/EEC, 92/31/EEC, and 93/68 EEC as amended.

Dave Rowland
MotorGuide Business Unit Manager
MotorGuide
835 W. 41st Street, Tulsa, OK,
USA

MotorGuide®
NEVER STOP.

At **MotorGuide**, we've taken all the victories, failures, blood, sweat, tears, hours, days and years to heart and built what are possibly the best performing, most reliable trolling motors ever.

It's a result of re-engineering from top to bottom, from our new digital modules, to new switches and props. Why? The reason is simple. To give you the advantage—and, in this case it's a digital advantage.

Because at MotorGuide, we believe there are some things you should **Never Stop** doing,

NEVER STOP LEARNING,
NEVER STOP IMPROVING,
AND NEVER EVER STOP FISHING.

MotorGuide®
NEVER STOP.

IMPORTANT!!

REGISTER YOUR PRODUCT

The warranty registration card (located inside the box) should be completed and mailed to MotorGuide to validate your warranty.

WARRANTY CARD REGISTRATION IS INCLUDED IN THE BOX AND IS SEPARATE FROM THIS MANUAL.

PLEASE FILL OUT IMMEDIATELY AND MAIL TO VALIDATE YOUR WARRANTY.

Thank you for purchasing this MotorGuide product.

TABLE OF CONTENTS

General Information

Safety DO's and DON'Ts 2

How to use this Manual 2

Specifications 2

Wiring & Battery Information

Wire and Cable Routing 3

Establishing a Common Ground 3

Recommendations 3

12 Volt Battery Hook-up 4

24 Volt Battery Hook Up 4

36 Volt Battery Hook Up 4

Mount Installations

Transom Mount Installation 5
- Twist Tiller Models 5
- Using Quick Stow 5

Pontoon Mount Installation 5

Bow Mount Installation 6

Bow Mount Operation

Installing the Motor into the Mount 7

Removing the Motor from the Mount 7

Raising and Lowering the Trolling Motor 7
- Raising The Motor 7
- Lowering the Motor 7

Adjusting the Steering Tension (Hand Operated Models) 7

Adjusting the Motor Depth 8

Trolling Motor Operation

Directional Indicator 8

Speed Control 9
- Five-Speed & Variable-Speed Motors 9
- Constant / Momentary / High-Bypass 9
- Twist Tiller Speed Control 9

Permanent Foot Pedal Mounting 9

Digital Steering Trolling Motors

Features and Operation 10

How to Operate the Digital Steer Motor 10
- Steering the Motor 11
- Controlling the Motor Prop 11

Motor Set-Up 11
- Stow Alignment Procedure 11
- Programming Momentary Buttons 11
- Center Alignment 12
- Center Alignment Procedure 12

Making Final Touches 12
- Hard Mounting the Foot Pedal 12
- Adjusting Foot Pedal Resistance 13
- Foot Pedal Calibration 13

Maintenance

Replacing the Propeller 14

Tour Edition–Cable Tension Adjustment 14

Customer Responsibilities 14
- Battery 14
- Freezing Temperature Storage 14
- Great White Saltwater Models 14

Troubleshooting

Problems & Possible Causes / Solutions 15

Repair Parts and Service

For Repair Service 16

Replacement Parts & Ordering 16

MotorGuide Accessories 16

Warranty Information

Two-Year Warranty 17

Three-Year Warranty 17

GENERAL INFORMATION

Please read and retain this manual. The information within describes the proper procedures for safely installing, operating and maintaining your motor.

The description and specifications contained herein were in effect at the time this manual was approved for printing. MotorGuide, whose policy is one of continual improvement, reserves the right to discontinue models at any time, to change specifications, designs, and methods of procedure without notice and without incurring obligation.

Safety and operating information that is practiced along with good common sense can help prevent personal injury and product damage.

WARNING

DIGITAL MOTORS:
If the motor automatically throttles back, it indicates something may be wrong with the motor and it should be taken in for service.

WARNING

DIGITAL MOTORS:
A slight voltage drain occurs when the trolling motor is continually connected to the battery for extended periods of time. To prevent battery drain when not in use fro an extended period, disconnect the trolling motor from the power source.

CAUTION

Disconnect the trolling motor from the battery(s) before charging.

Safety DO's and DON'Ts

Do not allow children to operate the trolling motor without adult supervision.

Do not modify the unit in any way or add accessories other than approved MotorGuide accessories.

Do not power-wash your trolling motor.

Do disconnect the power from the motor when replacing the prop, removing debris around the prop, charging batteries, putting your boat on a trailer or when the motor is not in use.

Do make sure the foot pedal is secured and the motor is securely locked into the stowed position when using a gasoline motor to move to another location, or when putting your boat on a trailer.

Do secure loose items on your boat before traveling at high speeds across the water.

How to Use This Manual

Review the following information carefully. These notices will alert you to potential dangers and important information.

The observance of **WARNINGS and CAUTIONS** alone does not eliminate the possibility of personal injury or product damage. Your close attention to the performance of recommended service procedures and the practice of responsible personal safety are major accident prevention measures.

WARNING

Failure to follow a safety WARNING can result in bodily injury.

CAUTION

Failure to observe CAUTION instructions can result in failure or damage to the product or equipment.

INFORMATION

Signifies important information about your trolling motor.

NOTE

Signifies a statement calling attention to general information about your trolling motor.

Specifications

Model	Volts	Kwatts	Kilos
T25	12	0.20	6.11
T30	12	0.20	6.11
30	12	0.20	7.08
36	12	0.25	7.7
40	12	0.25	7.7
46	12	0.28	8.17
54	12	0.34	10.7
71	24	0.48	15.92
54 V	12	0.34	10.7
70 V	24	0.48	15.92
71 V	24	0.48	19.92
82 V	24	0.78	22.4
109 V	36	0.88	24.2
54 V DS	12	0.34	10.7
82 V DS	24	0.78	21.8
109 V DS	36	0.88	23.3

WIRING & BATTERY

WARNING

Batteries contain sulfuric acid which can cause severe burns. Avoid contact with skin, eyes, and clothing. The battery also produces hydrogen and oxygen gasses when being charged. This explosive gas is released through the battery vents and may form an explosive atmosphere around the battery for several hours after it has been charged. Electrical arcing or flames can ignite the gas and cause an explosion which may shatter the battery and could cause blindness or other serious personal and property damage. Refer to your battery manufacturer's guidelines for charging instructions.

WARNING

Be sure all switches are in the OFF position before connecting the motor to the batteries. Electrical arcing near the battery could ignite hydrogen gas and cause the battery to explode.

WARNING

Avoid serious injury or death from a possible fire caused by a direct short; do not jump-start an outboard motor using the trolling motor battery/batteries.

Wire & Cable Routing

- Route trolling motor wires on the opposite side of the boat from other miscellaneous boat wiring (bow light wireing, spot light wiring, etc.).
- Transducer installation should be installed according to the manufacturer's specifications. To avoid interference, cables should be routed separately from the trolling motor power cables.
- **IMPORTANT: Do not route the transducer cable down the trolling motor power cord or foot pedal assembly cable. Route the transducer cable down the arm of the mount, then into the bow console.**
- Sensitive electronics, depth finders in particular, should be connected directly to the main engine battery. If only a one battery system is used, then connect with separate cables.

Establishing a Common Ground

MotorGuide recommends isolating the trolling motor battery/batteries from the main engine battery.

Electrolysis Issues – Using the engine starting battery as a source of power for any trolling motor may cause electrolysis on metallic parts.

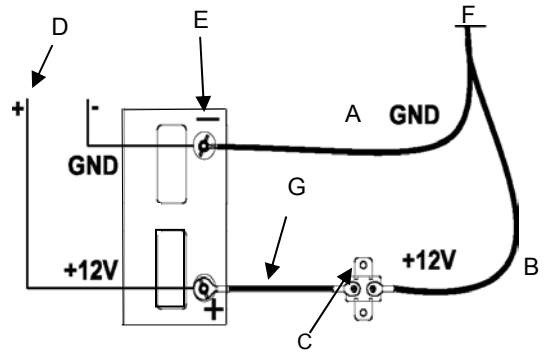
- ✓ If you have followed the battery wiring and installation instructions in this manual and your boat continues to have electrolysis issues, you will need to separate the trolling motor from any other boat electronics.
- ✓ Remove the engine starting battery from the wiring configuration of the boat and isolate the power circuit for your trolling motor.

- **Establish a Common Ground:** Common ground means the ground for the main engine accessories and your trolling motor are connected to the same negative ground terminal.
- Not having a common ground can cause severe corrosion or electrolysis. If left unchecked, damage may be caused to your trolling motor and boat.
- Establishing a common ground connection will allow increased sensitivity and improve detail on a sonar display.

Recommendations

- **Battery Type** – The recommended battery is a 12-volt Deep Cycle battery.
- **Circuit Protection** – MotorGuide recommends installing a 50 amp manual-reset circuit breaker in line with the trolling motor positive leads within (1.8 m) 72 inches of the battery(s). To order a circuit breaker kit, contact your local Service Dealer, request kit number **MM5870**.
- **Wire Size** – For optimum performance, MotorGuide recommends the use of six (6) gauge (13 mm) wire if extending existing wire beyond the standard battery cable supplied with the product.
- **Bow Plugs** – For temporary trolling motor installations, MotorGuide recommends the use of a quality plug designed for marine applications.

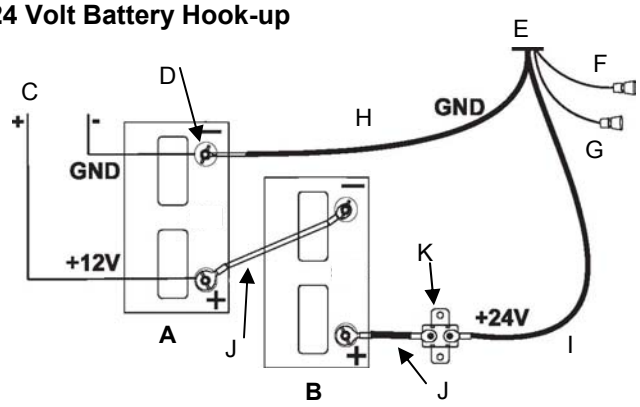
12 Volt Battery Hook-up



A) Black battery lead (-)
B) Red battery lead (+)
C) 50 amp circuit breaker
D) Positive lead to main engine, bilge pumps, aerators, accessories
E) Common ground
F) Power cable
G) Jumper Wire

Connect the red battery lead to the battery positive (+) post and the black battery lead to the battery negative (-) post. Install a 50 amp circuit breaker in line with the positive lead as shown above.

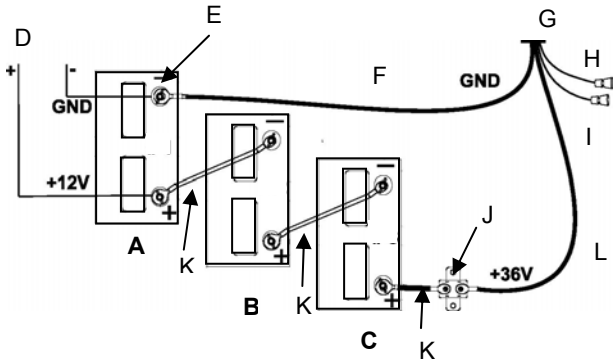
24 Volt Battery Hook-up



A) Battery A
B) Battery B
C) Positive lead to main engine bilge pumps, aerators, accessories
D) Common ground
E) Power cable
F) To foot pedal (DS models only)
G) To optional sonar display (sonar ready models only)
H) Black battery lead (-)
I) Red battery leads (+)
J) Jumper wire
K) 50 amp circuit breaker

Connect the black battery lead from the power cable to the negative (-) post on battery A and the red lead to the positive (+) post on battery B. Connect a jumper wire between the negative (-) post of battery B and the positive (+) post of battery A. Install a 50 amp circuit breaker in line with the positive lead to battery B as shown above.

36 Volt Battery Hook-up



A) Battery A
B) Battery B
C) Battery C
D) Positive lead to main engine, bilge pumps, aerators, accessories
E) Common ground
F) Black battery lead (-)
G) Power Cable
H) To foot pedal (DS models only)
I) To optional sonar display (sonar ready models only)
J) 50 amp circuit breaker
K) Jumper wire
L) Red battery lead (+)

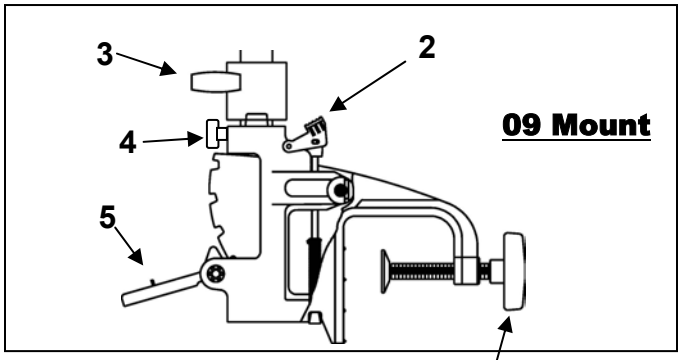
Connect the black battery lead from the power cable to the negative (-) post on battery A. Connect the red battery lead from the power cable to the positive (+) post of battery C. Connect a jumper wire between the positive (+) post of battery A to the negative (-) post of battery B. Connect another jumper wire between the positive (+) post of battery B to negative (-) post of battery C. Install a 50 amp circuit breaker in line with the positive battery lead as shown above.

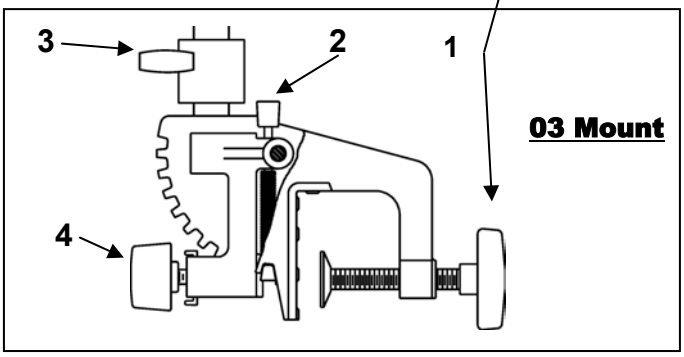
MOUNT INSTALLATIONS

Transom Mount Installation

CAUTION

When adjusting the tilt on your motor, keep your fingers clear of the area between the column and bracket.





Twist Tiller Models

1) **Clamp screws –** The clamp screws allow for easy motor installation and removal. Mount your motor on the transom, and then tighten the clamp screws securely.

2) **Tilt position pin –** This pin allows you to adjust the tilt of the motor.

3) **Depth collar adjustment –** The depth of the motor can be adjusted up and down by loosening the depth collar knob. The depth collar is located on the column directly above the mount. After adjusting to the position and depth desired, retighten the knob.

4) **Steering tension adjustment –** To adjust the steering resistance, simply tighten or loosen the tension knob.

5) **Quick Stow –** Comes standard on some saltwater models only. A Quick Stow kit **(MGA052B6)** can be purchased from a MotorGuide Service Dealer.

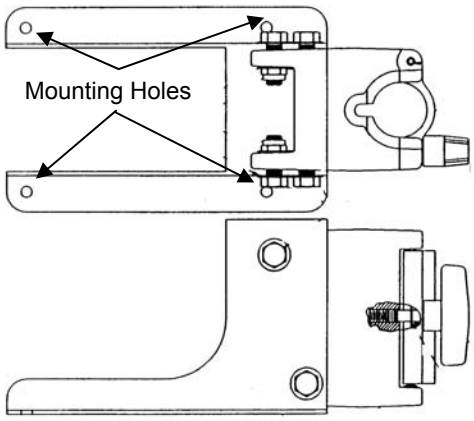
Using Quick Stow

Quick Stow allows you to stow your motor vertically as you move from spot to spot. To lock the trolling motor in a raised position, loosen the steering tension knob and raise the motor the full length of the column, then push the Quick Stow lever up into the lock position. Leave the lever unlocked while operating the motor.

The Quick Stow device is designed to be stiff to ensure extended life without slipping. To make the operation of Quick Stow easier:

- To loosen the Quick Stow, pull up on the column while pushing down on the lever.
- To secure the Quick Stow, push down on the column while pulling up on the lever.

Pontoon Mount Installation



1) Carefully select the area on the deck to install the mount. Choose an area where the mount will provide ample clearance for all of the motor positions including the running and stowing positions.

2) Place the mount base on the surface of the boat deck where it is to be mounted; use the mount base as a template to mark the location of the holes.

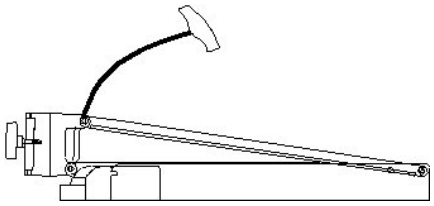
3) Drill mounting holes with a (6.5 mm) ¼ inch drill bit and clear the holes of any debris. Countersink the holes (only on fiberglass boats) and again clear any remaining debris from the holes.

4) Install the 4 stainless steel mounting bolts through each of the bracket mounting holes.

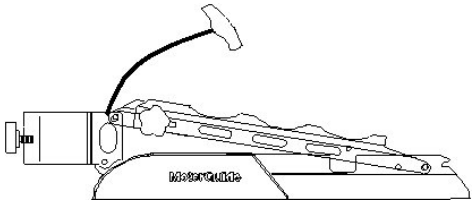
5) Install the 4 stainless steel washers and nuts on the bottom side of the deck and tighten securely.

6) The trolling motor can now be placed in the mount.

Bow Mount Installation

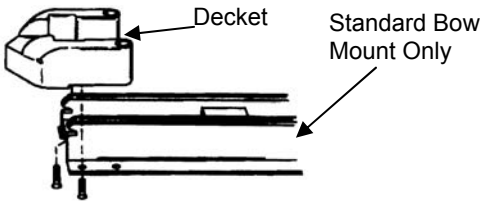


07 Standard bow mount

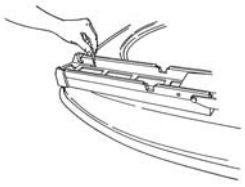


Heavy duty breakaway mount with springs

1) Carefully select the area on the deck to install the mount. Choose an area where the mount will provide ample clearance for all of the motor positions including the running and stowing positions. Ensure the forward mounting screws are placed in a location on the deck where there is enough room to install the screws and washers without penetrating the hull.

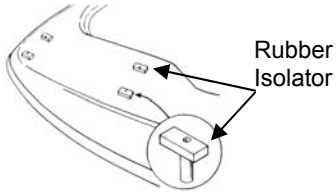


2) Using a Phillips head screwdriver and the decket screws provided in the hardware bag, secure the decket to the mount base. (The decket for heavy duty spring mounts can be installed last.)

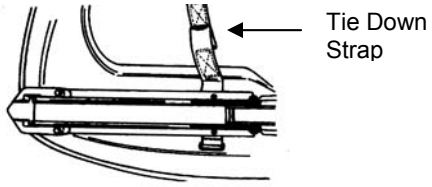


3) Use the front mounting holes that go through the plastic decket and the rear mounting holes on the mount base. Place the mount base on the surface of the boat deck where it is to be mounted; use the mount base as a template to mark the location of the holes. Use a very sharp drill bit to drill holes (5 cm) 2 inches into the boat deck. Drill a (13mm) ½ inch hole when using the optional rubber isolators; otherwise follow installation instructions for specific mounting hardware.

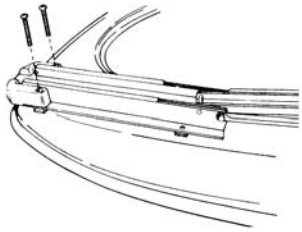
NOTE: **A rubber spacer or washer should by used between the base of the mount and the boat mounting surface when the rubber isolators are not used.**



4) IF applicable, insert the rubber mounting isolators into the drilled holes. Position the wider side of the isolator toward the outside of the mount bracket.



5) **07 standard mount only – Position tie down strap between the rear mount holes and the rubber mounting isolators.** Position the velcro side down on the deck and the buckle facing toward the outside of the boat.

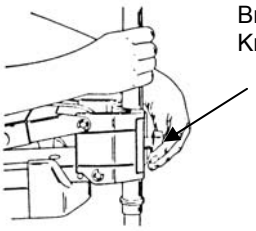


6) Place the mount bracket on the isolators and align the holes. Install the two longer screws into the front holes and the two shorter screws into the rear holes. Tighten all of the mounting screws.

It is important that the bracket lies even against the isolators before bolting it to the deck. If the mount is not even, it will bind as it is bolted down making it difficult or impossible to unlatch. Once installed, the latch pins should snap firmly into place and release easily with a quick snap of the wrist and a light pull of the rope handle.

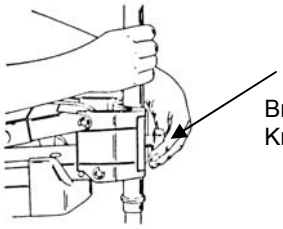
BOW MOUNT OPERATION

Installing the Motor into the Mount



1. Turn the bracket door knob to the left to loosen and open the bracket door.
2. Place the motor column into the bracket and close the door.
3. Turn the bracket door knob to the right to tighten the motor column in the bracket.

Removing the Motor from the Mount



1. Turn the bracket door knob to the left to loosen and open the bracket door.
2. Remove the motor column from the bracket and close the door.

Raising and Lowering the Trolling Motor

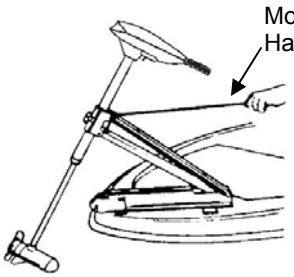
⚠ WARNING

Your trolling motor should be raised and lowered slowly by rope to avoid damage to your boat and motor. To avoid pinching a toe or finger in the mount, keep your hands and feet clear of the mechanism when extending and retracting the mount.

⚠ WARNING

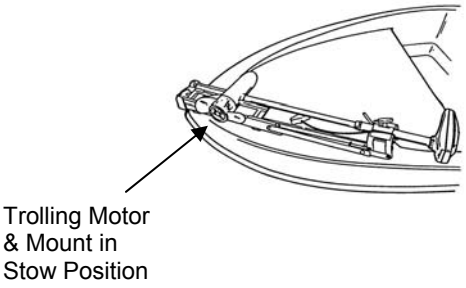
Ensure the motor is turned off before raising and lowering the motor.

Raising the Motor



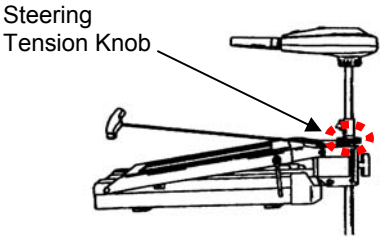
Raise the motor out of the water by pulling on the mount rope handle. Be careful not to let the weight of the motor cause it to drop. Pull the rope handle until the motor can be gently laid across the mount in the stow position. Pressure is required to lock the motor into the stow position. The trolling motor shaft is designed to bend slightly, therefore apply pressure by pushing down on the top housing and the shaft to lock the motor into stow.

Lowering the Motor



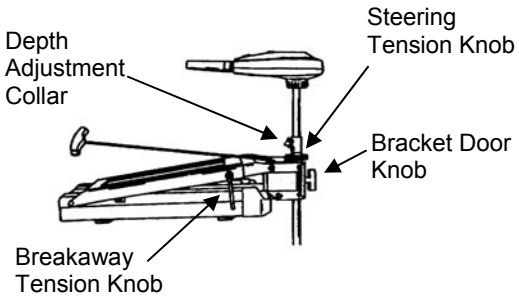
To lower the motor into the water from the stow position; lift the motor up by pulling the rope handle. Be careful not to let the weight of the motor cause it to drop. Gently lower the motor into the water.

Adjusting the Steering Tension (Hand Operated Motors)



Loosen the steering tension knob until the motor column turns around freely. Tighten the steering tension knob to secure the motor column in place.

Adjusting the Motor Depth



Hand Operated Motors – Loosen the depth adjustment collar so the motor column moves freely up and down. Raise or lower the motor column until the propeller blades are submerged (15 to 30 cm) 6 to 12 inches below the water surface and tighten the collar.

Foot Operated Motors - Loosen the bracket door knob so the column moves freely up and down. Raise or lower the motor column until the propeller blades are submerged (15 to 30 cm) 6 to 12 inches below the water surface and tighten the door.

Adjust the breakaway knobs on the side of the mount so the motor will breakaway when encountering underwater obstacles. Do not over-tighten or lubricate the breakaway handle.

Special Note for the 07 Standard Bow Mount:
It is normal for the bow arms to bend out slightly and flex when the motor is in the stow position. The mount is designed this way to keep pressure on the trolling motor during rough water situations.

The Tie-Down Strap is required to completely secure the motor. A Tie Down Strap can be ordered through a MotorGuide Service Dealer, part number # MGA029B6.

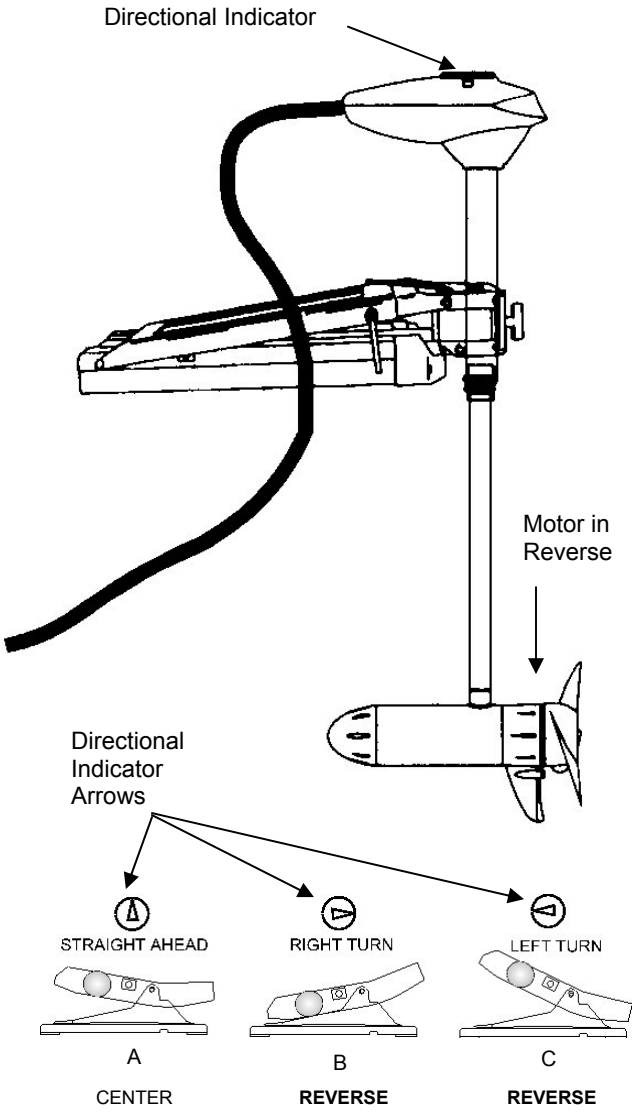
Special Note for the 16 Bow Mount
It is normal for the motor column to bend slightly in the stow position. The mount is designed this way to keep pressure on the trolling motor during rough water situations.

TROLLING MOTOR OPERATION

Directional Indicator

⚠ WARNING

Do not operate the trolling motor while it is out of the water. Keep clear of the propeller. A rotating propeller can cause personal injury.

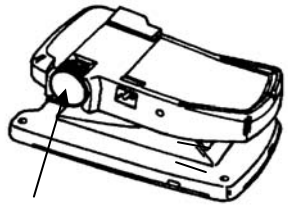


The indicator provides directional information at a glance:

A) **Straight Ahead** – Foot pedal in middle
B) **Right Turn** – Toe down; motor steers boat to right (continue to push all the way down for reverse).
C) **Left Turn** – Heel down; motor steers boat to left (continue to press all the way down for reverse).

Speed Control

Five-Speed and Variable Speed Motors

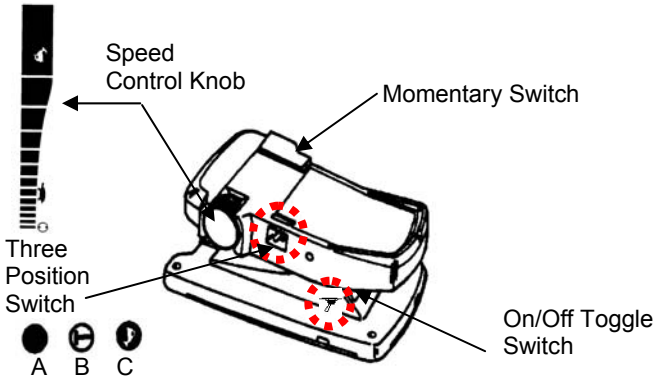


Speed Control Knob

Foot operated motors are either five-speed or variable speed models. Control the speed of your motor by rolling the speed control knob with your hand or foot until you reach the desired speed.

- ✓ **Five-Speed Motor** - The speed control knob on a five-speed motor is numbered 1 through 5 and allows you to select one of five preset speeds.
- ✓ **Variable Speed Motor -** The speed control knob on a variable speed motor allows you the capability of variable speed selections from off to high.

Constant / Momentary / High-Bypass



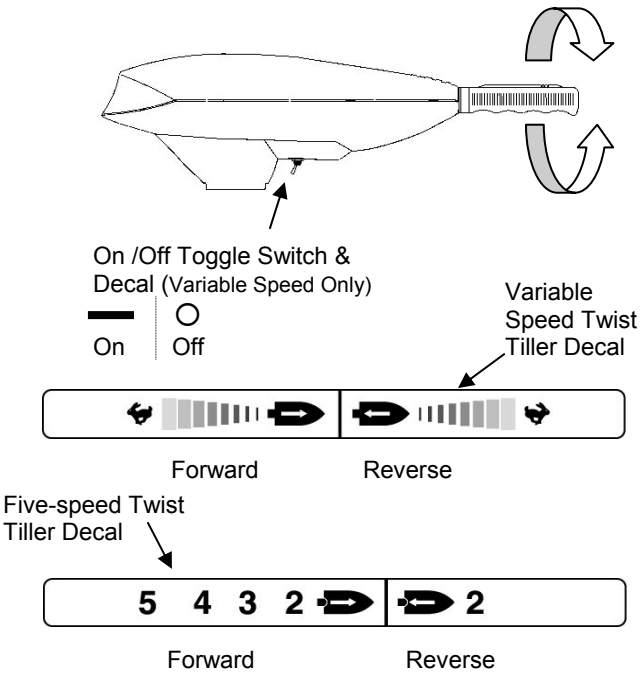
Momentary Switch – The Momentary Switch is located on the top right side of the foot pedal. The Momentary Switch works in conjunction with the Three-Position Switch when it is in positions B and C.

Three-Position Switch - This three-position switch provides you with three options for operating the motor: constant on, momentary, and high-bypass.

A) **Constant On** - This allows the motor to run continuously at the speed selected by the Speed Control Knob without the use of the Momentary switch.
B) **Momentary -** This allows the motor to activate with the Momentary switch at the speed selected by the Speed Control Knob.
C) **High-Bypass** - This will automatically deliver full thrust when the Momentary switch is activated.

On / Off Toggle Switch – Power on and off switch. Available on variable speed motors only.

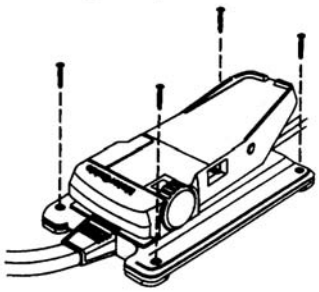
Twist Tiller Speed Control



Twist Tiller Handle - Rotate handle clockwise for forward speeds and counterclockwise for reverse speeds.

Toggle Switch – Flip the Toggle switch to " ▬ " to turn the motor on and "○" to turn the motor off. This switch is available on variable speed motors only.

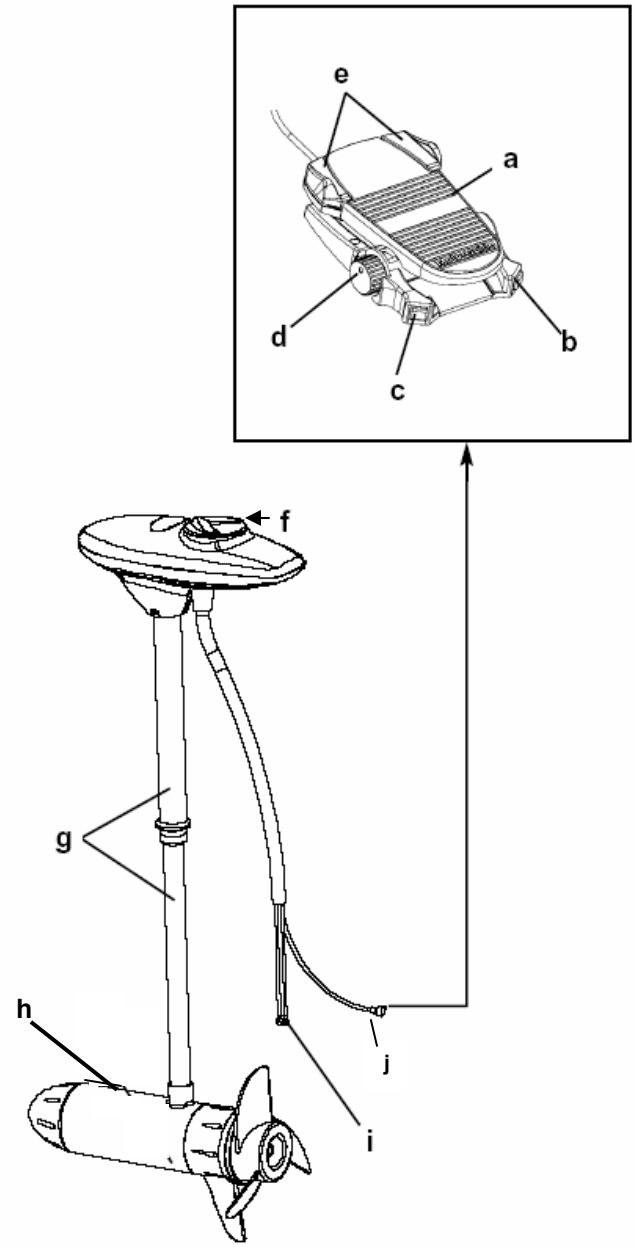
Permanent Foot Pedal Mounting



1) Place the foot pedal in the desired location on the boat deck.
2) Using a (3 mm) 7/64 inch drill bit, drill holes through the holes in the foot pedal base and into the boat deck.
3) Use four #8 x 2 inch stainless screws and screw the foot pedal base securely to the boat deck.

DIGITAL STEERING TROLLING MOTORS

Features and Operation



a) Heel/Toe action servo positioning pedal
b) Stow/Run button
c) Constant on button
d) Speed wheel
e) Selectable momentary buttons
f) Lighted directional pointer
g) Stainless steel outer tube and column
h) Lower unit
i) Battery cables
j) Foot pedal connection

Auto ON/OFF – Digital Steering units will turn ON when deployed to the run position and OFF when stowed. Press the Stow button to position the motor to land on the bracket channel. Pull the motor back into the boat and onto the bracket.

Motor Control – Microprocessor technology is used to monitor motor performance and prevent damage. This technology also prevents the motor from overheating.

Straight Line Steering – The foot pedal has a center "Detent" position which is calibrated to drag the boat in a straight line. Whenever you want the boat to be pulled in a straight line, simply rock the pedal to the center "Detent" position and press the Constant-On button on the foot pedal.

This feature depends on proper calibration set by the trolling motor operator. See the "Foot Pedal Calibration" section in this manual.

How to Operate the Digital Steer Motor

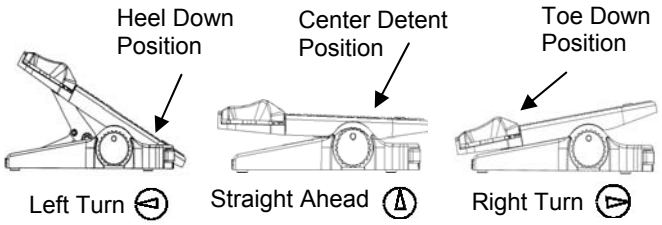
WARNING

Always disconnect the motor battery leads from the power source when not in use. This will prevent accidental starting of the motor which could cause personal injury or damage to your boat.

Turn on the Motor - Plug the motor into the power source. Use the pull rope to lower the motor into the water (known as the RUN position). The motor automatically turns on when in the vertical run position.

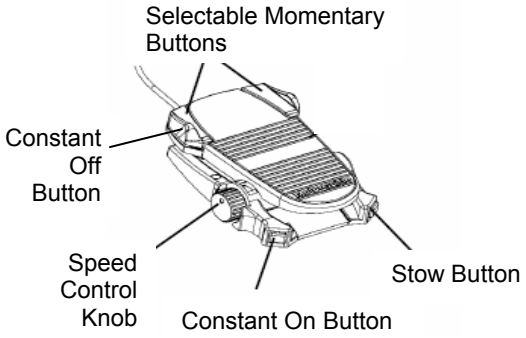
Stow the Motor - Push and release the Stow button once. The lower unit rotates to the stow position and all pedal functions will cease. Set the motor on the bracket (horizontal) and it will turn off. Unplug the motor when moving the boat by trailer and when storing.

Steering the Motor



Rock the foot pedal heel down to steer left and toe down to steer right. The motor has a steering range of 400 degrees to help you maneuver in tight spots. The 400 degree range allows you to point the motor past the straight back position from either the left or right side. This provides easy control when backing up the boat.

Controlling the Motor Prop



There are two ways to operate the prop:
Momentary or Constant-On.

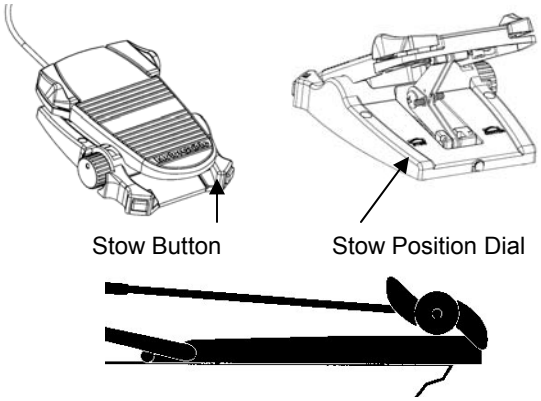
Momentary - Press and hold either Momentary button to rotate the prop. The Momentary buttons on the Digital Steer products are programmable. (See Programming Momentary buttons.)

Constant-On - Press the Constant-On button once to rotate the prop in a continuous run mode. To cancel Constant-On, press and release the Constant-On button or the left Momentary button.

Speed Control Knob - Control the speed of your motor by rolling the speed control knob with your foot until you reach the desired speed.

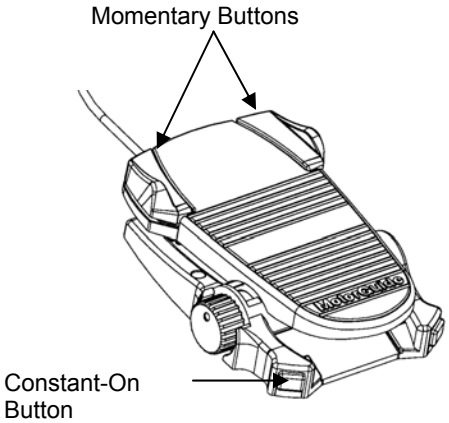
Motor Set-Up

Stow Alignment Procedure



1) Plug the motor battery cables into a power source.
2) Lower the motor into the Run position.
3) Push the Stow button once.
4) Rotate the Stow Position Dial until the lower unit is approximately positioned to lie on the mount with the prop facing to the outside of the boat. The mount is designed for the prop to face the port (left) side of the boat. If the mount is installed on the starboard side (right) of the boat, the prop will be stowed facing inside.
5) Pull the rope handle to lift the motor out of the water. With the lower unit close to landing on the bracket rails, use the dial to steer the lower unit to the left or right. When the motor is aligned to land squarely on the bracket rails, gently lower it into position. Push down on the top housing and column to lock the motor into place.

Programming Momentary Buttons



Both Momentary buttons are programmed at the factory to be active. If you prefer having only one active button, the other button can be deactivated.

To Activate a Single Momentary Button:

1) Press and hold the Momentary button you want to activate.
2) Press and release the Constant-On button **three times**.
3) Release all buttons.

To Activate Both Momentary Buttons:

1) Press and hold both Momentary buttons.
2) Press and release the Constant button **three times**.
3) Release all buttons.

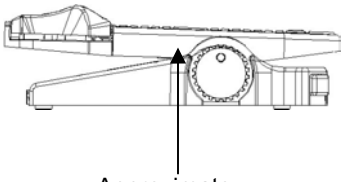
Center Alignment

Keep the following in mind before alignment:

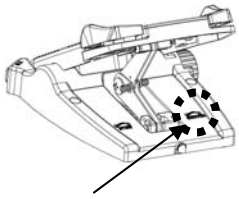
- ✓ Pick a location protected from wind and free of heavy weeds, timber and other obstructions.
- ✓ Always keep your outboard straight and in the water. Your outboard acts as a keel that, if turned to the side, will bias your boat's movement through the water. Leaving your outboard in the water is also important as it stabilizes the back of your boat while steering, especially at moderate to high speeds.
- ✓ Always securely tighten the bracket retention knob to hold the shaft and head securely.
- ✓ If Center (Straight Ahead) is not calibrated correctly, you will not achieve the best steering performance. This motor is equipped with Smart Steer software that relies on Center (Straight Ahead) being calibrated correctly.

Remember, the Stow and Center settings can be easily recalibrated as needed.

Center Alignment Procedure

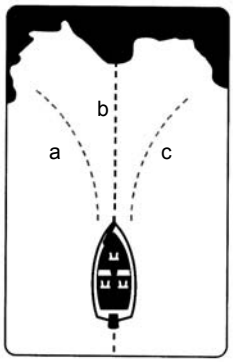


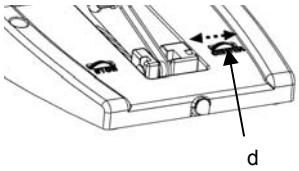
Approximate Center Detent Position



Center Calibration Dial

1) Lower the motor to the Run position.
2) Place the foot pedal in the center detent position.
3) Use the Center Calibration Dial to steer your lower unit to approximately straight ahead.
4) Set the speed wheel at 0.

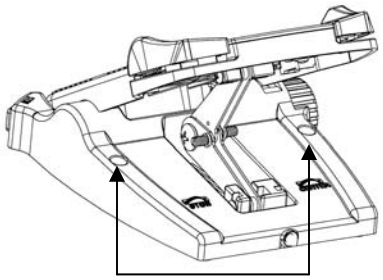




a) Needs adjustment to right
b) Straight ahead.
c) Needs adjustment to left
d) Center Calibration Dial

5) Pick an object directly in front of your boat (a large tree, rock, dock, etc.). Push and release the Constant-On button once. Ramp up your speed wheel, watching how your boat moves toward the object.
6) Use the Center Calibration Dial to steer the boat straight ahead.
7) Adjust the dial until your boat moves in a straight line for at least 10 seconds.
8) Press and release the Constant-On button once to stop the motor.
9) This calibration may be repeated as needed.

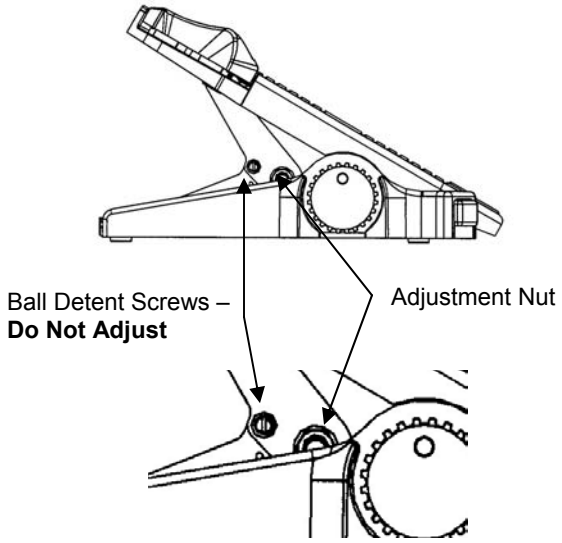
Making Final Touches
Hard Mounting the Foot Pedal to the Deck



Mounting Holes

To permanently mount your foot pedal to the deck, use the predrilled mounting holes on the left and right side of the pedal base. The holes are designed to accommodate a flat head #10 stainless steel screw.

Adjusting the Foot Pedal Resistance



CAUTION

Do not adjust ball detent screws. They are factory adjusted to give maximum feel to the pedal center position.

The purpose of setting the pedal resistance is to make the pedal feel comfortable for you. You may adjust the clutch mechanism to change how firm the pedal feels. The pedal resistance can be adjusted using a Phillips screwdriver and a (13 mm) 1/2 inch wrench. To make this adjustment, place the foot pedal in the heel-down position. Tighten or loosen the adjustment nut. Your foot pedal should operate smoothly without binding or slipping.

The foot pedal has a center position stop that you can feel while rocking it from end to end (heel down to toe down and visa versa). This is done with the Ball Detent screws shown in the above figure. The Ball Detent screws are factory set to give maximum pressure to this feature and are not intended for readjustment.

Foot Pedal Calibration

The foot pedal was initially calibrated at the factory. Recalibrate your foot pedal if you:

- Notice you are not getting a full 400-degree steering rotation.
- Have installed a new pedal on your motor.
- Have moved the trolling motor installation from one side of the boat to the other.

Foot pedal calibration will maximize steering control at high speeds.

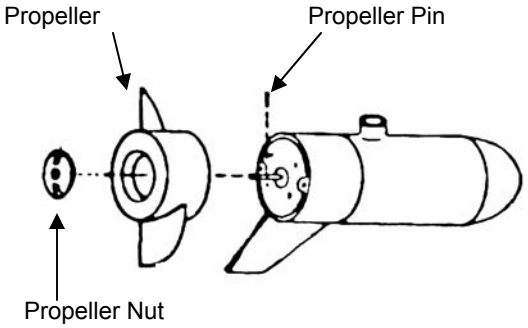
To Calibrate a New Foot Pedal:

1) Put the motor in the run position.
2) Press the Constant-On and Momentary buttons simultaneously. Hold both buttons down for three seconds. (You will notice the motor turn to the center position and start making a clicking noise in the head.)
3) Push the pedal forward to the toe-down position and press the Momentary button.
4) Move the pedal to the center detent position and press the Momentary button again.
5) Move the pedal to the heel-down position and press the Momentary button.

The calibration for the foot pedal is now complete and the clicking will stop. The motor should now steer in accordance with the pedal movement.

MAINTENANCE

Replacing the Propeller



CAUTION

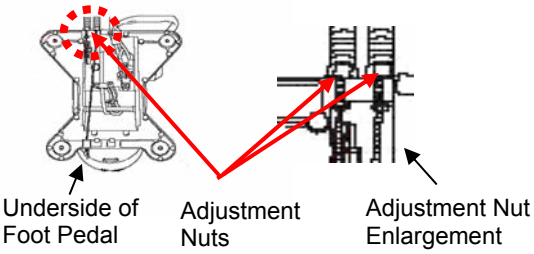
Make sure the motor is disconnected from the battery before replacing the propeller.

CAUTION

Do not strike a bent prop pin with a hammer to remove the pin. This may cause damage to the armature, which is not covered by warranty. MotorGuide recommends using pliers.

1) While holding the propeller blade, use a prop wrench to loosen and remove the propeller nut.
2) Pull the propeller straight off. If the prop is stuck, grasp one blade with one hand and tap lightly on the backside of the opposite blade with a rubber mallet. If necessary, repeat the procedure on all blades until the propeller comes off.
3) If the propeller pin is bent, replace it.
4) Align the new propeller with the propeller pin.
5) Reinstall the propeller nut and tighten securely with your fingers. Tighten another 1/4 turn using a MotorGuide Ninja Prop Wrench, part number **MGA050B6.**

Tour Edition - Cable Tension Adjustment



Using a 7/16 wrench, tighten the cable tension by turning the adjustment nuts counter-clockwise until the cable tension reaches the optimal tightness.

Customer Responsibilities

The motor/mount warranty does not cover items that have been subjected to operator abuse or negligence. To receive full value from the warranty, you must maintain the motor/mount as instructed in this manual.

- Check behind the propeller after each use to ensure weeds, fishing line or other debris are not wrapped around the propeller or the propeller shaft.
- Periodically lubricate all the pivot points with a non-aerosol lubricant. Never use an aerosol lubricant to grease or oil any part of the unit. Many spray lubricants contain harmful propellants that can cause damage to various parts of your trolling motor.
- Check the tightness of the battery lead connections.
- Periodically inspect for loose or corroded wiring connections.
- Thoroughly rinse your trolling motor with freshwater after each use in saltwater.
- Periodically make a visual inspection for tightness of all nuts, bolts and screws.
- Before or after use, periodically check the prop nut for tightness.

Battery

Recharge your batteries after each use. Follow the battery manufacturer's recommendations for battery maintenance. Have your batteries tested annually to ensure quality of operation.

Freezing Temperature Storage

Store your trolling motor where it will not be affected by freezing temperatures.

Great White Saltwater Models Only

Corrosion on the metal components of the trolling motor occurs when two or more metals that are dissimilar are brought into electrical contact under water.

The use of a sacrificial anode causes all of the other metals on the trolling motor to become the cathodes. The anode will corrode and the trolling motor will not.

Maintenance: If excessive corrosion occurs, replace the anode.

Sacrificial Anode Kit
Part Number: **MAR00204**

TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSES AND/OR SOLUTIONS
Loss of power	• The propeller may be fouled. Remove the propeller; clean or replace if necessary. • The battery connections may be corroded. • The battery may have low voltage. Recharge and test for a bad cell. • The wire gauge from the battery to the trolling motor may be insufficient. (Six-gauge wire is recommended.) • A bad or faulty connection or pinched wire could exist in the boat wiring or trolling motor wiring. • The permanent magnets may be cracked or chipped. The motor will whine or grind. • There may be water in the lower unit or oily residue inside the top housing.
Motor makes excessive noise or vibrates excessively	• The propeller may be fouled. Remove the propeller; clean or replace if necessary. • The propeller may be loose. Check to see if the propeller is secure. • The armature may be bent. Remove the propeller and set the motor at medium speed. Turn the unit on and look for the shaft to wobble. • The magnets may be interfering with the armature. Turn the power is off. Turn the prop by hand; it should turn freely with a slight magnetic drag. • The bearings or bushings may be worn out.
Motor fails to run at any speed	• Check the trolling motor fuse/circuit breaker on the boat. • Check for loose or corroded connections. • Check the plug for a loose or bad connection. • Test the on/off, bypass and micro switches. • Make sure the power is off. Turn the prop by hand; it should turn freely with a slight magnet drag.
Motor loses one or more speeds	• There may be loose connections in the top housing. • The rotary switch may be bad. • The propeller may be fouled. Remove the propeller; clean or replace if necessary. • The speed coils in the lower unit may be burned.

Mount is hard to unlatch from the run or stow position when using pull rope	• Your bow mount is designed to easily release with a quick pull of the rope handle. If it does not easily release, it is typically due to improper installation of the bracket.
	  ○ It is possible the bracket was not resting evenly on top of the rubber isolators before it was tightened down.
	  ○ Once tightened, the bracket binds up causing the latch to function improperly.
	  ○ You can test this by loosening the screws slightly (start with the two forward screws) and latching the bracket.
	  ○ You will usually find the problem area by alternately loosening each screw until the bracket releases easily.
	  ○ The solution is to install shim washers (not provided) and then retighten the screws.
	• Apply general-purpose grease to the latch pins and clamp screws periodically.

Foot pedal is hard to turn **(Mechanical steer models)**	• Check to see if the column is bent and binding against outer tube. • The outer tube may be bent and binding against the column. • The bottom bushing or bearing may be out of alignment, broken or dirty. • The steering cable may be kinked; replace the steering cable.
Motor does not turn the full 400 degree rotation **(Digital models only)**	• The foot pedal may need to be recalibrated. See page 13 in this manual for calibration instructions.
Arrow backlight is off **(Digital models only)**	• The arrow light turns off after 3 minutes of motor inactivity. If the light stays off, press the momentary button to turn the light back on. If the light continues to stay off, take your motor in fro service.
Battery drains **(Variable-speed Digital models only)**	• A slight voltage drain will occur if your variable speed motor remains continually connected to your battery. Install a power disconnect switch or disconnect the trolling motor.
Motor automatically throttles back **(Variable speed models only)**	• Refer to your nearest Service Dealer for assistance with trolling motor repairs.

INFORMATION Refer to your nearest Service Dealer for assistance with trolling motor repairs.

FOR REPAIR SERVICE

Contact your nearest MotorGuide Service Dealer. See a complete listing of Service Dealers in the US and Canada at our MotorGuide web site: www.motorguide.com.

Call Mercury Marine **Consumer Affairs** to obtain the name and location of the Service Dealer nearest you.

United States:	**1-920-929-5040**
Australia Pacific:	**61-3-9791-5822**
Canada:	**905-816-4751**
Europe, Africa & Middle East:	**32-87-323-211**
Japan:	**81-53-423-2500**
Latin America:	**954-744-3500**
Singapore:	**65-6546-6160**

REPLACEMENT PARTS AND ORDERING

MotorGuide has established Service Dealers as Parts Distributors throughout the United States and Canada. Have the following information ready and contact the nearest Service Dealer to order parts:

- Model Number
- Serial Number
- Part Number

MOTORGUIDE ACCESSORIES

Making It More Perfect. Who says you cannot make the best even better? MotorGuide® factory accessories let fishermen customize motors to their own unique needs. In addition, every one is a perfect fit.

REPLACEMENT PROPS

Prop	Description	Number
#10	3" Ninja, 2 Blade Power Prop	MGA0476
#12	3.5" Ninja, 2 Blade Power Prop	MGA0495
#15	3.5" Machette, 3 Blade Metal	MGA087X6
#16	3.5" Machette III, 3 Blade	MGA089X1

ADDITIONAL HARDWARE ACCESORIES

16-Foot Pedal Extension Cable
MFPEC16
Works with DS Series, PTSv Tracking and Great White DS Series motors.

Bounce Buster™ for Gator Mount
MGA053B6
Prevents mount, motor, and boat damage in rough water conditions. (For 20, 20.5, 23 and 23.5 Gator Mounts.)

Bounce Buster™ II
MGA097B6
Prevents mount, motor, and boat damage in rough water conditions. (For 21 and 24 Gator Spring Mounts.)

Tie Down Strap
MGA029B6
Prevents damage to the boat and motor when running in rough water conditions.

Transom Motor Mount Bracket
MGA067X3
Allows the use of a transom motor on the front of a jon boat or canoe. (Mount not included.)

Removable Mount
MGA068X3 (07, 15, 16 mounts)
MGA092X1 (20.5, 21 mounts)
MGA093X1 (23, 23.5, 24 mounts)

Specially designed for fish-and-ski and pontoon boats. Aluminum construction. Adapts to most trolling motors.

Weight Plate
MLP312315
Foot pedal weight plate for Freshwater Series bow mount motors.

Ninja™ Prop Wench
MGA050B6
Comes complete with spare prop nut and two prop pins, allowing fast prop changes.

Mounting Isolators
MGA015PB6 – Standard Mount

Absorbs shock and protects electronics. Ideal for mounting all marine accessories without having to go under the deck. Four per package.

MOTORGUIDE LIMITED TWO-YEAR WARRANTY

(KEEP YOUR ORIGINAL PURCHASE RECEIPT)

For recreational use customers, MotorGuide Freshwater Series electric trolling motors are warranted to the original retail purchaser[1] to be free from defects in material and/or workmanship for a period of two (2) years from the date of purchase. This Limited Warranty begins on the date the product is first sold to a retail purchaser or the date on which the product is first put into service, whichever occurs first. Commercial[2] users of these products receive coverage for one (1) year from the date of first retail sale. MotorGuide Accessories are covered by this Limited Warranty for a coverage period of one (1) year from the date of retail sale.

This warranty does not cover product damage due to abuse, i.e., bent columns, bent armature shafts, broken control cables, etc., accidents, modifications, misuse, excessive wear or damage caused by an owner's failure to provide reasonable and necessary installation or care. Opening the lower unit (motor) by anyone other than an authorized Service Dealer will void this warranty. To obtain warranty service, the purchaser should deliver or return the unit (postage prepaid and insured) to any MotorGuide Authorized Service Dealer. Products returned by mail should also be carefully packaged and include a note describing the nature of the problem and/or service requested. A copy of the proof of purchase or registration verification is required with the return of the product for warranty consideration. MotorGuide, at its discretion, will repair or replace items covered under the terms of this warranty. Neither MotorGuide nor MotorGuide Service Dealers are responsible for damages to MotorGuide products due to repairs performed by anyone other than an authorized MotorGuide Service Dealer. Neither MotorGuide nor Mercury Marine is responsible for failure or damage caused by improper installation, set-up, preparation, or previous service or repair errors.

The product registration must be processed by MotorGuide within ten (10) days from the date of purchase to validate your warranty. MotorGuide products requiring service not covered under the terms of this warranty may be repaired or replaced for a reasonable fee. ALL INCIDENTAL AND\OR CONSEQUENTIAL DAMAGES ARE EXCLUDED FROM THIS WARRANTY. IMPLIED WARRANTIES ARE LIMITED TO THE LIFE OF THIS WARRANTY. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS OR THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER LEGAL RIGHTS WHICH MAY VARY FROM STATE TO STATE.

For Your Records:
Model
Number_____

Serial Number_____

[1] Warranty is transferable to any subsequent purchaser for the duration of the unused warranty period.
[2] Commercial use is defined as any work or employment-related use of the product, or any use of the product which generates income, for any part of the warranty period, even if the product is only occasionally used for such purposes.

MOTORGUIDE LIMITED THREE-YEAR WARRANTY

(KEEP YOUR ORIGINAL PURCHASE RECEIPT)

For recreational use customers, MotorGuide Tour, Digital Freshwater, Digital Steering, and Saltwater Series electric trolling motors are warranted to the original retail purchaser[1] to be free from defects in material and/or workmanship for a period of three (3) years from the date of purchase. This Limited Warranty begins on the date the product is first sold to a retail purchaser or the date on which the product is first put into service, whichever occurs first. Commercial[2] users of these products receive coverage for one (1) year from the date of first retail sale. MotorGuide Accessories are covered by this Limited Warranty for a coverage period of one (1) year from the date of retail sale.

This warranty does not cover product damage due to abuse, i.e., bent columns, bent armature shafts, broken control cables, etc., accidents, modifications, misuse, excessive wear or damage caused by an owner's failure to provide reasonable and necessary installation or care. Opening the lower unit (motor) by anyone other than an authorized Service Dealer will void this warranty. To obtain warranty service, the purchaser should deliver or return the unit (postage prepaid and insured) to any MotorGuide Authorized Service Dealer. Products returned by mail should also be carefully packaged and include a note describing the nature of the problem and/or service requested. A copy of the proof of purchase or registration verification is required with the return of the product for warranty consideration. MotorGuide, at its discretion, will repair or replace items covered under the terms of this warranty. Neither MotorGuide nor MotorGuide Service Dealers are responsible for damages to MotorGuide products due to repairs performed by anyone other than an authorized MotorGuide Service Dealer. Neither MotorGuide nor Mercury Marine is responsible for failure or damage caused by improper installation, set-up, preparation, or previous service or repair errors.

The product registration must be processed by MotorGuide within ten (10) days from the date of purchase to validate your warranty. MotorGuide products requiring service not covered under the terms of this warranty may be repaired or replaced for a reasonable fee. ALL INCIDENTAL AND\OR CONSEQUENTIAL DAMAGES ARE EXCLUDED FROM THIS WARRANTY. IMPLIED WARRANTIES ARE LIMITED TO THE LIFE OF THIS WARRANTY. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS OR THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO YOU. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER LEGAL RIGHTS WHICH MAY VARY FROM STATE TO STATE.

For Your Records:
Model
Number_____

Serial Number_____

[1] Warranty is transferable to any subsequent purchaser for the duration of the unused warranty period.
[2] Commercial use is defined as any work or employment-related use of the product, or any use of the product which generates income, for any part of the warranty period, even if the product is only occasionally used for such purpose.

IMPORTANT!!

REGISTER YOUR

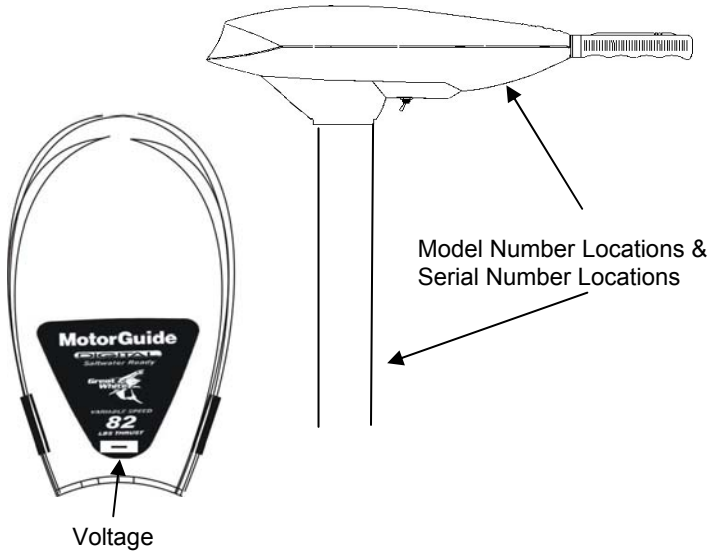
MotorGuide®
NEVER STOP.

PRODUCT

The warranty registration card (located in the box) should be completed and mailed to Mercury Marine to validate your warranty. To replace a lost warranty card, contact the Mercury Marine Registration Department at 1-920-929-5054.

WARRANTY CARD
REGISTRATION
IS INCLUDED IN THE BOX AND IS SEPARATE FROM THIS MANUAL.

PLEASE FILL OUT AND MAIL IMMEDIATELY TO VALIDATE YOUR WARRANTY.



Thank you for purchasing and registering this MotorGuide product.

MAINTENANCE LOG

Use this log to record all maintenance performed on your trolling motor. Save all work orders and receipts.

Date	Maintenance Performed

MotorGuide
835 W. 41st Street
Tulsa, Oklahoma 74107
(920) 929-5040